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CITY AND COUNTY OF SAN FRANCISCO
PUBLIC UTILITIES COMMISSION

May 17, 1956

MUNICIPAL RAILWAY
949 Presidio Avenue
Phone Fillmore 6-5656
Postal Zone 15

SUBJECT:

Municipal Railway
Development and Improvement Report

Mr. J. H. Turner
Manager of Utilities
287 City Hall
San Francisco, California

Dear Sir:

In accordance with your request, I am submitting this report to the Public Utilities Commission on the development and improvement of the Municipal Railway.

Because of the ever-changing conditions of the Municipal Railway, this report is as complete and inclusive as possible for conditions existing at the present time.

Very truly yours,

C. D. Miller

C. D. MILLER
General Manager

CDM:F

35 M 1124

D REF 352.9184 M612m

Miller, C. D.

Municipal Railway of San Francisco : report to 1956.

3 1223 04288 2580

TABLE OF CONTENTS

	PAGE
Introduction	1
Purchase of Market Street and California Street Railways	2
Problem of Passenger Decline	6
Revenues (Operating)	9
Revenue (Miscellaneous)	16
Costs (Operating)	17
Insurance and Claims	21
Capital and Other Costs:	
Accounting Department	25
Power and Plant (Department of)	26
Power Stations	26
Buildings:	
I. Geneva Car House	27
II. Geary Car House	27
III. Elkton Shops	28
Revenue Rolling Stock:	
Trolley Coaches	28
Cable Cars	28
Motor Coaches	28
Street Cars	28
Non-Revenue Rolling Stock:	
Automobiles	29
Trucks	29
Motorcycles	29

TABLE OF CONTENTS
(CONTINUED)

	PAGE
New PCC Cars for Tunnel Lines K, L, M and N	29
New PCC Cars for Line J - Church Street	30
Geary Street Line B Modernization	31
Castro Street No. 8 Trolley Extension	32
Rerouting of No. 3 Trolley Coach Line on Jackson	33
Sacramento Street Electrification	34
Vacuum Cleaning Equipment	36
Modern Fare Collection Equipment	36
Southern Pacific Loop	37
Replacement of Obsolete Office Equipment	38
Improvements at Elkton Shops	38
Summary of Estimated Costs and Annual Savings for Proposed Improvements	39

LIST OF STATEMENTS

Tax Subsidy from the Fiscal Year 1945-46 through 1955-56	5
Revenue Passengers and Total Passengers Carried from Calendar Year 1931 through 1955	6-A
Decline in Revenue Passengers for Major Transit Cities	6-B
Percentage Loss in Traffic for Raises in Fares in Several Major Cities	14
Revenue from Advertising	17
Decrease in Personnel	19-A
Funds Provided and Expended for Passenger and Damage Claims	24
Summary of Estimated Cost and Annual Savings for Proposed Improvements	39

TABLE OF CONTENTS
(CONTINUED)

LIST OF CHARTS

	PAGE
Vehicle Hours, Vehicle Miles, Revenue Passengers, Gross Revenue, Passenger Auto Registrations	6-C
Trend in Revenue Passengers and Mileage	6-D
Monthly Passengers, Mileage, Revenue and Expense	6-E
Revenue per Hour and Mile	6-F
Trend of Transit Traffic taken from "Passenger Transport" for May 4, 1956	7-A
Commendations and Complaints	8-A
Existing Fares in Large Cities - Surface Line	14-A
Operators' Wages Compared with Fares - December 28, 1912 through December 31, 1955	18-A
Improvement in Regularity of Service	20-A

MUNICIPAL RAILWAY

REPORT TO THE PUBLIC UTILITIES COMMISSION

1. INTRODUCTION

The following is a frank discussion of the problems confronting the Municipal Railway in a period when it and all transit systems are having a difficult time. It is common knowledge that for many years the Municipal Railway has been receiving a substantial tax subsidy from the people of San Francisco, and there appears little, if any, likelihood that this situation will change in the foreseeable future. We believe, however, that with constructive thinking the subsidy can be kept to a minimum and the essentials of good service can be maintained.

This report is our view of the problems and our present thinking as to the action we should take to meet them in the next five years. It is not intended that our views should be considered the "last word" on these subjects. If they merely arouse interest in the Municipal Railway problems and serve as a point of departure for intelligent and constructive discussion our purpose will be fulfilled.

2. HISTORICAL BACKGROUND

a) Origins of the Municipal Railway

The history of the Municipal Railway really begins with the adoption by the voters in 1898 of a new City Charter, which went into effect January 8, 1900. The policy in regard to utilities was declared in Article 12 of this Charter as follows:

"It is hereby declared to be the purpose and intention of the people of the City and County that its public utilities shall be gradually acquired and ultimately owned by the City and County."

On December 30, 1909, a bond issue in the amount of $2,020,000 was approved, providing funds for the construction of an electric street car line on Geary Street to replace the obsolete cable car line that was operating on an expired franchise. The operation of the Railway commenced on December 28, 1912, with less than 100 employees and 10 electric street cars over 11 miles of single track. The platform employees were paid $3 a day for 8 hours' work, the highest wage paid in the United States for this class of work. The private railway companies in San Francisco were then paying 27 cents an hour, or $2.70 for a 10-hour day.

The Geary Street Line was very popular from the start and due to the necessity for further transit service to new areas being developed the Municipal Railway was gradually extended to the Ingleside, Ocean View, Parkside, Sunset, Marina and Richmond Districts, then practically undeveloped sand dunes.

b) Purchase of Market Street and California Street Railways

On September 29, 1944, the Municipal Railway purchased the operative properties of the privately owned Market Street Railway for $7,500,000. This purchase was practically necessitated by the financial difficulties of the privately owned system during the war years, which threatened a transit breakdown, as the Market Street System was considerably larger than the Municipal Railway.

On January 7, 1952, the properties of the California Street Cable Railroad were acquired for $150,000. This purchase was also actuated by the financial difficulties of the private company.

c) Present Operation

Total plant and equipment paid for by the Municipal Railway is $41,657,247, of which $12,396,652 was contributed from City tax sources, $15,977,041 from earnings, $804,554 from sources other than taxes and $12,479,000 represents unredeemed bonds. From less than 100 employees and 10 cars in 1912, the Railway has grown until today it has 2,800 employees, 179 electric cars, 47 cable cars, 389 trolley coaches and 537 motor coaches, of which 170 are leased diesel coaches - a total of 1,152 vehicles, traversing 520 round trip miles of city streets and making 28,000,000 miles annually on 63 Lines.

The following is per cent of vehicle miles operated:

Street car	14.6
Trolley coach	34.0
Bus	49.7
Cable cars	1.7
	100.0

The Municipal Railway is a big operation, its 1955-1956 budget being $23,820,788. Of this amount $14,934,676 is for personnel services, $1,072,341 for retirement fund and $260,631 for social security. The remaining $7,553,140 is for material, supplies and contractual services.

Passengers carried, including school children, those using special tickets and transfers handled, average approximately 650,000 on week days. During the afternoon week day peak

there are over 860 vehicles on the streets and the Railway provides all-night Owl service on 15 Lines that fully cover the System.

During the past few years, considerable improvements have been made to the Railway. A $20,000,000 rehabilitation bond issue voted by the people in 1947 has been expended, resulting in the addition of 25 modern PCC cars, 364 trolley coaches and 259 motor coaches to the fleet.

An office building and four modern garages - two for trolley coaches and two for gas coaches - have been constructed. This modernization program has made possible the conversion of 19 street car Lines with their antiquated tracks and equipment, to rubber-tired operation.

This change-over from two-man cars to one-man operated rubber-tired vehicles made an annual saving in operation expenses of approximately $4,500,000. The physical plant of the Railway is now approximately three-fourths modernized and the service afforded to the City is above the average furnished in cities of comparable size.

3. FINANCIAL POSITION

Despite the modernization program and the high standard of service furnished by your Municipal Railway of today, the railway continually and steadily loses money.

During the past ten years the taxpayers of San Francisco have subsidized the Municipal Railway as follows:

Fiscal Year	General Fund	Capital Improvement Fund	Total Taxes
1945-46	0		0
1946-47	0		0
1947-48	0		0
1948-49	1,763,225.55	686,109.65	2,449,335.20
1949-50	11,913.94		11,913.94
1950-51	1,062,031.53		1,062,031.53
1951-52	1,887,984.65	487,132.50	2,375,117.15
1952-53	0		0
1953-54	0		0
1954-55	2,077,027.59		2,077,027.59
1955-56	* 3,102,691.00		3,102,691.00

* Tentative

The questions naturally arise as to -

Why is this subsidy necessary?

Is there any prospect of eliminating it?

Can it be substantially reduced?

Simply stated the reason for the subsidy is that, like all transit operations, the Municipal Railway is steadily losing its passengers and hence its revenue. Against this loss there seems no possibility of an offset from substantially reduced service, and, as every one knows operational costs are soaring.

Let us examine the problem of the loss of passenger travel and then discuss the possible means of increasing revenues despite such loss, or of reducing costs to alleviate the effects of the loss.

4. PASSENGER DECLINE

The most important problem confronting the Railway is the continuing loss of passengers, resulting in decreased revenue in a time of climbing costs. Each year the number of passengers is declining by approximately 4.5 per cent, and the San Francisco experience is merely a reflection of the general nation-wide trend. The decrease in the number of revenue passengers carried by the Municipal Railway and by the transit industry as a whole is shown on the following pages. The decline in passengers is due mostly to the people preferring to ride in their own automobiles, regardless of the expense involved, rather than use the convenient public transportation system. Checks made by recent traffic studies show that during the peak the average passenger load is only 1.5 per automobile. At this rate, one modern bus can carry the equivalent of 33 automobiles. Such factors as the highly advertised automobile, coupled with prosperous times and the easy time-payment plans for purchasing of automobiles, contribute to the large number of private motor cars that are crowding our streets and taking passengers from Municipal Railway vehicles.

While fare raises have contributed to the loss of passengers, every new garage and parking lot built in the downtown area is also a contributing factor in taking passengers off our vehicles. Because of new Freeways linking the downtown to the outer districts, plus the added downtown parking facilities, a great many people have started car pools, taking away more Municipal Railway riders.

With the building of the St. Mary's garage, it was the opinion of the Parking Authority that it would reduce much of

 (Continued on Page 7)

MUNICIPAL RAILWAY OF SAN FRANCISCO
STATEMENT OF REVENUE PASSENGERS
AND
TOTAL PASSENGERS CARRIED
BY CALENDAR YEARS JANUARY 1931 TO DECEMBER 1955

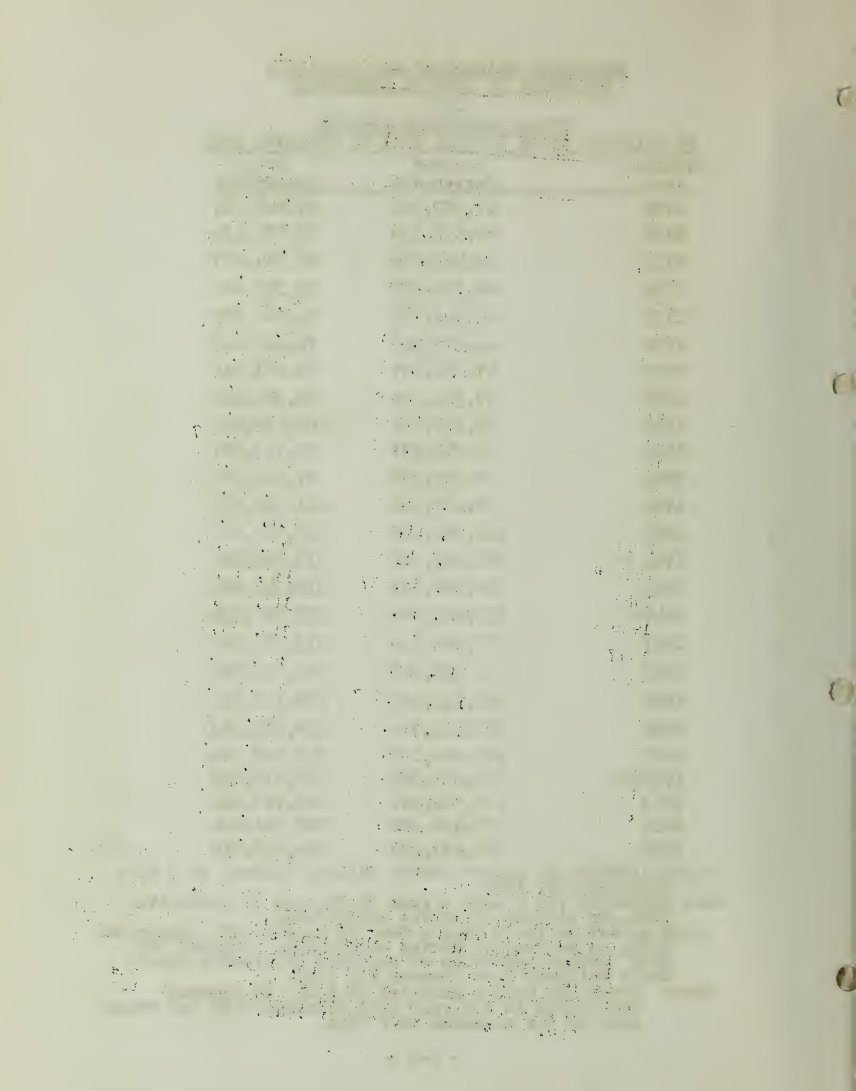
Calendar Year	Revenue Passengers	Total Passengers
1931	67,227,560	79,848,824
1932	60,633,110	72,874,436
1933	56,465,074	68,114,697
1934	60,196,806	73,352,602
1935	61,941,749	74,960,789
1936	64,072,861	76,482,443
1937	67,280,657	80,683,541
1938	77,326,516	93,366,440
1939	88,120,811	106,478,465
1940	83,740,931	99,793,387
1941	82,937,498	97,312,278
1942	98,489,646	111,319,928
1943	125,011,516	137,840,063
1944 *	169,464,705	213,593,316
1945	252,186,037	332,342,694
1946**	232,610,669	318,599,236
1947	221,416,656	313,571,162
1948	212,338,948	303,874,760
1949	195,932,797	280,155,235
1950	183,419,710	249,695,293
1951	182,060,175	247,448,214
1952***	168,031,865	230,019,140
1953	157,056,961	216,763,514
1954	150,436,350	207,591,954
1955	144,693,237	199,932,210

*Consolidation of Market Street Railway Company at 5 a.m. September 29, 1944.

**No operation for 4 days - June 30 to July 3, inclusive, 1946, on account of strike conditions.

***No operation for 3 days - Feb. 20 to Feb. 22, inclusive, 1952, on account of strike conditions. Figures for 1952 include operation of acquired California Street Cable Railroad from January 13, 1952.

Note: There has been a decrease of 42.6% in revenue passengers in the year 1955 compared with ten years ago, or the calendar year 1945.

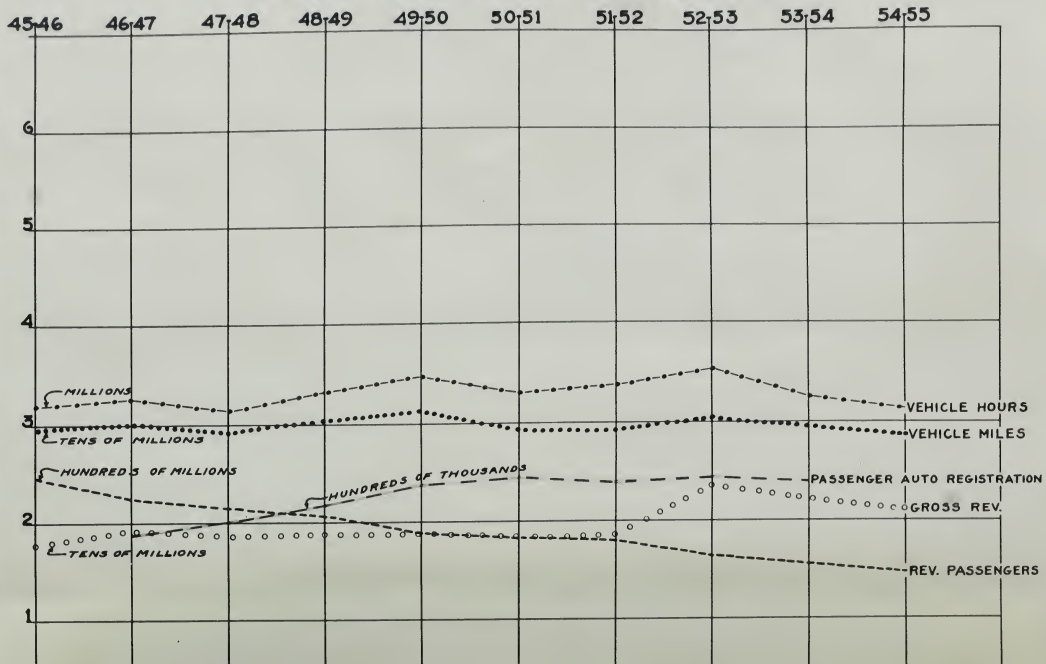


DECLINE IN REVENUE PASSENGERS FOR MAJOR TRANSIT SYSTEMS SERVING POPULATIONS GREATER THAN 500,000

TRANSIT SYSTEMS	1945 REVENUE PASSENGERS	1955 REVENUE PASSENGERS	PERCENT DECLINE
San Francisco Municipal Railway	252,186,037	144,693,237	42.62
New York City Trans. Auth.			
Rapid Transit	1,952,928,241	1,362,142,751	30.25
Surface	660,168,183	415,482,996	37.06
Third Ave. Trans. System	401,456,269	220,946,907	44.99
N.Y.C. Omnibus-Fifth Ave. Coach Lines	333,756,839	231,955,910	30.50
Chicago Trans. Auth.			
Rapid Transit	120,677,644	112,889,976	6.45
Surface	921,837,576	510,603,672	44.61
Philadelphia Transp.Co.			
Rapid Transit	139,586,645	84,353,689	39.57
Surface	562,600,017	301,757,619	46.36
Los Angeles Trans.Lines	277,689,426	125,441,537	54.83
City of Detroit-Dept. of Street Railways	466,182,306	210,473,312	54.85
Baltimore Transit Co.	263,573,228	132,200,409	49.84
St.Louis Pub. Serv. Co.	334,753,358	134,579,207	59.80
Capital Transit Co. Washington, D.C.)	411,288,239	128,967,880	68.64
Metropolitan Transit Authority (Boston)	420,096,165	224,203,168	46.63
Pittsburgh Rys. Co.	279,998,372	110,974,676	60.37
Milwaukee & Suburban Transport Co.	289,010,929	129,927,957	55.04
Niagara Frontier Tr.Syst.	138,576,533	74,315,808	46.37
New Orleans Public Service, Inc.	153,477,486	115,884,486	24.49
Twin City Rapid Transit Co.	193,739,036	81,294,859	58.04
Cincinnati Transit Co.	124,434,480	65,434,204	47.41
TOTAL	8,698,017,009	4,918,424,260	43.45

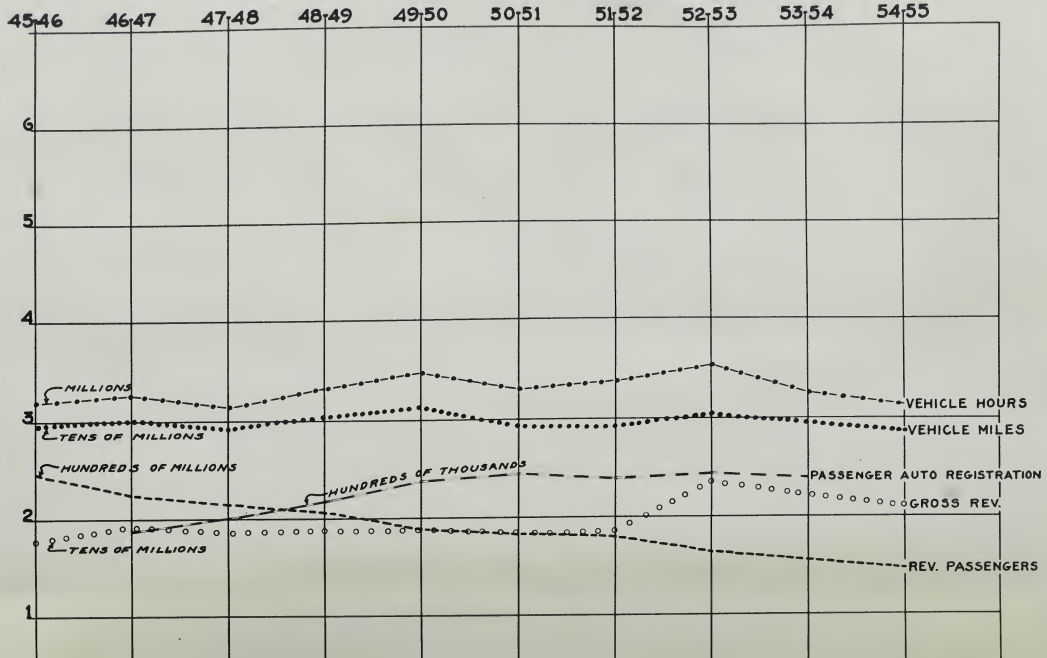
MUNICIPAL RAILWAY SAN FRANCISCO

VEHICLE HOURS — VEHICLE MILES — REVENUE PASSENGERS
GROSS REVENUE — PASSENGER AUTO REGISTRATION



MUNICIPAL RAILWAY SAN FRANCISCO

VEHICLE HOURS — VEHICLE MILES — REVENUE PASSENGERS
GROSS REVENUE — PASSENGER AUTO REGISTRATION

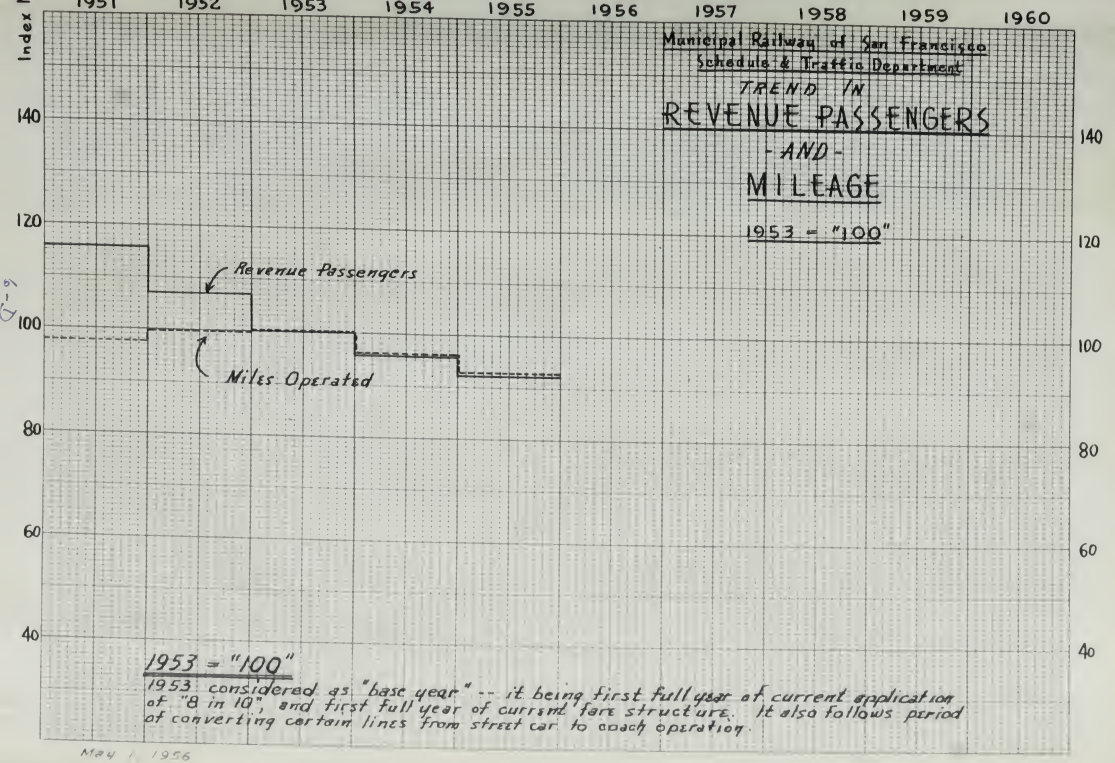


NO. 340-34 DIETZGEN GRAPH PAPER
12 X 20 PER INCH
EUGENE DIETZGEN CO.
MADE IN U. S. A.

Municipal Railway of San Francisco
Schedule & Traffic Department

TREND IN REVENUE PASSENGERS -AND- MILEAGE

1953 = "100"



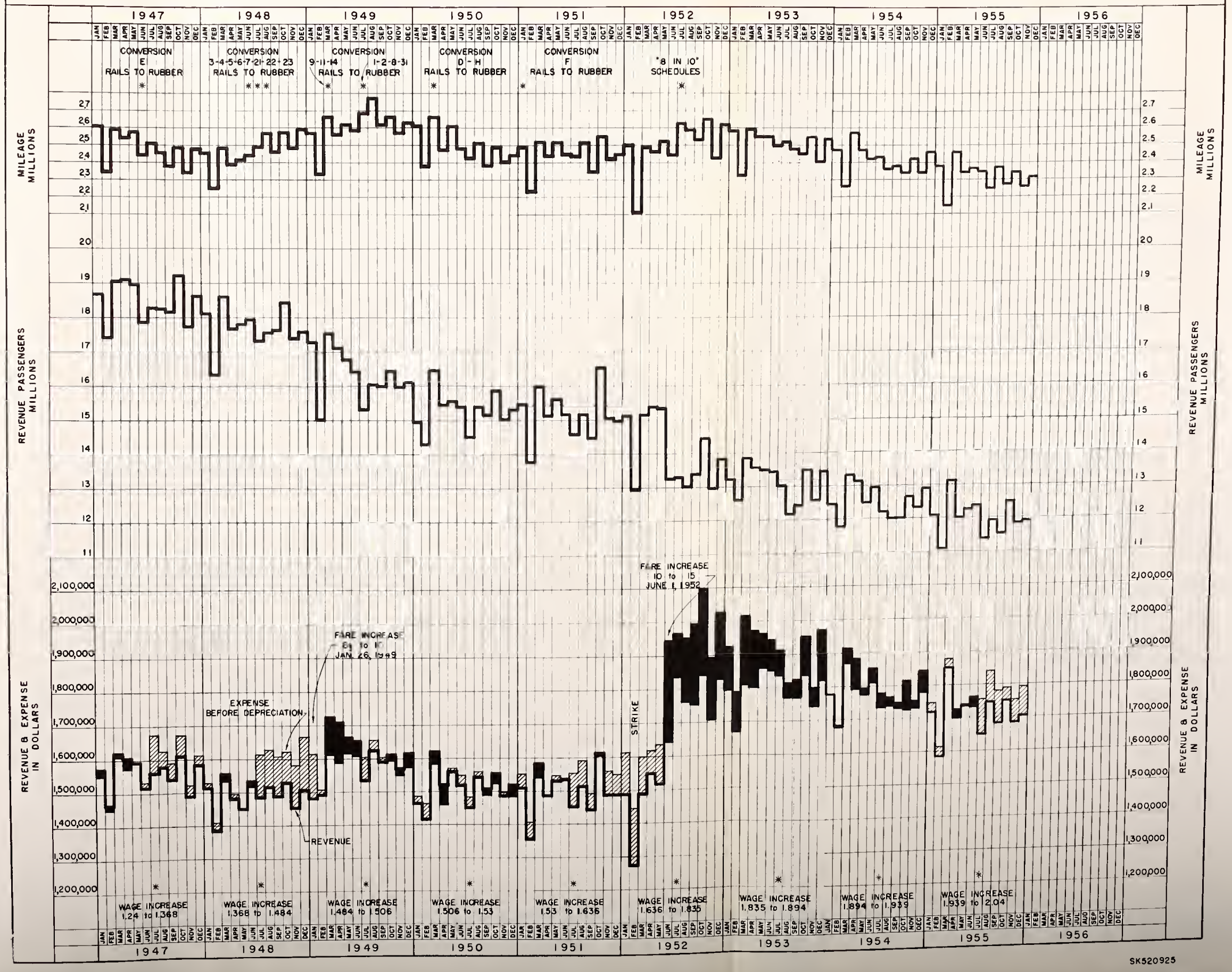
G-9

1953 = "100"

1953 considered as "base year" -- it being first full year of current application of "8 in 10", and first full year of current fare structure. It also follows period of converting certain lines from street car to coach operation.

May 1 1956

SAN FRANCISCO MUNICIPAL RAILWAY
MONTHLY PASSENGERS, MILEAGE, REVENUE & EXPENSE
BEFORE DEPRECIATION



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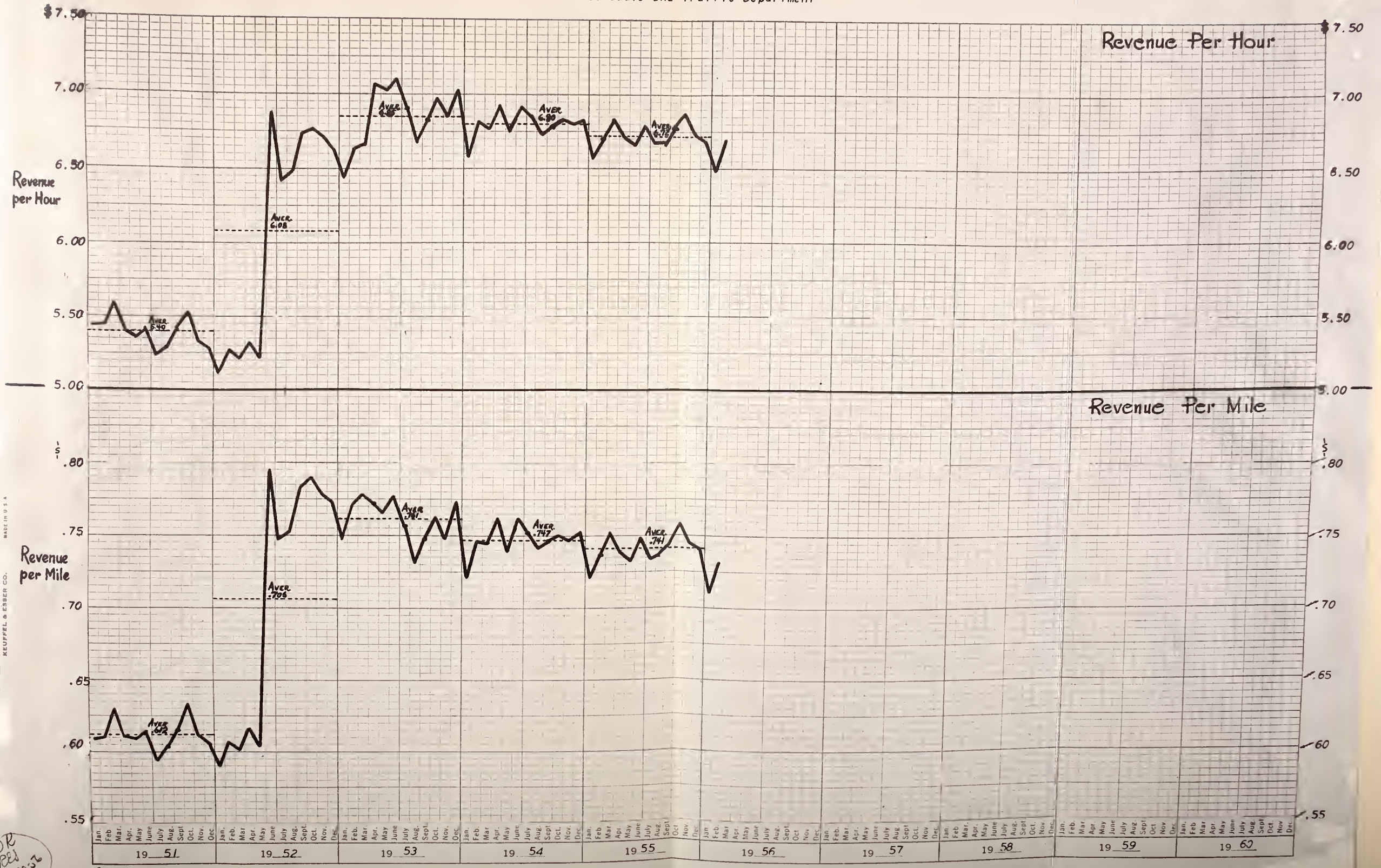
MUNICIPAL RAILWAY OF SAN FRANCISCO
Schedule and Traffic Department



Source: Statement No. 22.

Total System Revenue per Vehicle Hour and Per Vehicle Mile

6 - F

OR REC 4-30-62

KEUFFEL & ESSER CO. MADE IN U.S.A. 10 YEARS 3 MONTHS 398-2001 X 10 DIVISIONS

the street parking in that area. This theory did not work out as it only added more parking of autos in this area since the garage attracted additional autos. This is also true with every other garage built in the downtown area, and such new parking facilities are in direct competition with the Railway.

The trend for passengers leaving the Railway for private automobile is actually less here than in other large cities. On page 7-A is a chart showing the national trend. For cities between 500,000 and 1,000,000 population the decline for March 1956, compared to March 1955, was 9.75%. For this period the decline in San Francisco was 4.06%. For the three-month period shown, the national decline was 9.01%, compared to 2.65% for San Francisco. We believe that in not reducing mileage in the same ratio as our passenger revenue decreased, we have helped to prevent further losses. Most properties have had to reduce service to overcome their deficit and in doing so, give such poor service they further decreased their revenue passengers.

What can be done against the competition of private automobiles? A much advocated solution has been the establishment of fringe parking lots.

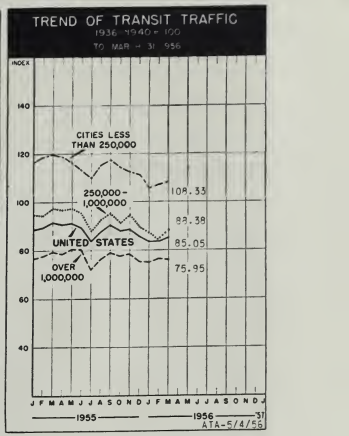
The experts have stated that San Francisco is small in area and is not adaptable to fringe parking because autos from other counties and from the outer districts desire to go as direct and as nearly as possible to their destination. The experience of other cities with such lots has not been encouraging. The municipally owned Detroit transit system last month brought to an end one of its latest experiments to boost business: two large parking lots offering free parking for Detroit transit riders who bought round-trip tickets and low rates for parkers on business in the neighborhood. These parking lots

MARCH PASSENGER TRAFFIC

By EUGENE B. McCAUL, Director, Statistical Department, ATA

The transit industry in the United States carried 984,780,000 passengers during the month of March, 1956, a decline of 6.7 per cent from the corresponding month of 1955.

The March, 1956, index for the United States is fixed at 85.05—6.57 points below March, 1955, and 1.43 above February, 1956. For the larger cities over 1,000,000 population, the index is fixed at 75.95 for March, 1956—3.60 points below the corresponding month of 1955. For cities in the 250,000 to 1,000,000 population range, the index stands at 88.38—9.02 points below 1955. For cities in the smallest population range, the index stands at 108.33—11.60 points below March, 1955.



February Revenue Up

The tentative estimate of total operating revenue for February, 1956, indicates it was 1.95 per cent above February, 1955. For the same period there was a decline of 2.88 per cent in passenger traffic.

Total Passengers Carried on Transit Lines of the United States in March, 1956, and During the Three Months Ended March 31, 1956

Population Group	March		3 Months Ended 3/31/56	
	1956 (Thous.)	% Change From 1955	1956 (Thous.)	% Change From 1955
Cities over 1,000,000	430,826	— 4.04	1,239,801	—1.75
500,000—1,000,000	143,118	— 9.75	404,101	—9.01
250,000— 500,000	143,059	— 7.83	406,739	—6.94
100,000— 250,000	99,094	— 8.67	278,890	—7.80
50,000— 100,000	76,933	—10.40	224,020	—9.32
Less than 50,000	35,275	— 8.14	100,927	—7.38
TOTAL ALL CITIES	928,305	— 6.75	2,654,478	—5.25
SUBURBAN AND OTHER	56,475	— 5.82	156,319	—4.85
GRAND TOTAL	984,780	— 6.70	2,810,797	—5.23

SOURCE -- "PASSENGER TRANSPORT"
for May 4, 1956

have been closed. The lots are to be sold and they expect to obtain $200,000 for one and $350,000 for the other, which gives a general idea the size of the lots. It may be, however, that in certain particularly adapted areas such lots might be advantageously established. This should not be done until a thorough study has been made of the possibilities by transit experts.

Another suggested solution is to maintain in effect a large advertising campaign to keep the people aware of their stake in the Municipal Railway, the excellency of its service and the advantages to be derived from patronizing it.

In line with this policy, the Public Utilities Commission, on April 27, 1950, entered into a contract with the J. Walter Thompson Co., national advertising agency, to conduct a public information and promotion campaign at a cost of $60,000.

The contract required, as a first step, a public opinion survey in order to determine the principal causes of complaint and the character of improvements desired by the public. Upon completion of the survey, the agency recommended that the advertising media be restricted to the four metropolitan newspapers and to car cards because of budgetary limitations.

Immediate beneficial results were obtained in the reduction of complaints and a twenty-fold increase in commendations. The downward revenue trend, which has been experienced nationally, however, continued. It was the belief of the Commission that this program has been a sound investment and should be continued. A report on this subject is now being prepared by the Public Relations Department of the Commission. Over the past few years funds for advertising have been placed in the budget but have been deleted by the Mayor and Supervisors.

MUNICIPAL RAILWAY OF SAN FRANCISCO

Schedule and Traffic Department

Commendations

Complaints

Insufficient Service

923

950

Aver 720

Aver 630

Aver 534

Aver 534

Aver 471

Aver 245

Aver 163

Aver 218

Aver 96

Aver 85

Aver 46

Aver 24

Aver 31

Aver 8

Aver 8

880
800
720
640
560
480
400
320
240
160
80
0

1880
1800
1720
1640
1560
1480
1400
1320
1240
1160
1080
1000

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

19 51 | 19 52 | 19 53 | 19 54 | 19 55 | 19 56 | 19 57 | 19 58 | 19 59 | 19 60

Each Line 8

Commendations

Complaints

Insufficient Service

8-A

10 YEARS BY MONTHS
X 110 DIVISIONS
KEUFFEL & ESSER CO.
358-200L
MADE IN U.S.A.

5. OPERATING REVENUE - FARES

With the number of passengers declining steadily, how are the revenues of the Municipal Railway to be increased? Inasmuch as the major source of revenue has been and will continue to be passenger fares most of the discussion has centered around various proposals for either increasing, decreasing or changing the present rates.

For a period of almost 32 years, the Railway retained the basic 5-cent fare, increasing to 7 cents on September 29, 1944, 10 cents on May 20, 1946 and 15 cents on June 1, 1952. The fare increases were made necessary because of loss of passengers and increased costs of labor and material. The present 15-cent fare, with 5 cents for school children, is still lower than many systems of comparable size. In 15 of the larger cities the fare is 20 cents and in some cases higher where the zone system is in effect.

a) Five cent Fare

It has been suggested (most recently by Supervisor Blake) that a decrease in fares to 5¢ would attract enough new riders to the Railway to more than make up for the loss of revenue.

The most recent study is based on a reduction of fare from 15 cents to 5 cents between the hours of 9:00 AM and 3:00 PM Weekdays and Saturdays. In order to ascertain the number of 15 cent cash fare riders now carried on the railway system between these hours, it was necessary to combine a survey from fare register readings with a traffic check based on percentages from applicable hourly line counts.

Also, as the total 15 cent cash riders carried on any particular day will vary somewhat, due to weather and other conditions, in order to develop the proper percentages, we have used twenty-two (22) Weekdays and five (5) Saturdays in March 1956, to ascertain the average number of Weekday and Saturday 15 cent cash riders.

The results of the evaluation of this proposal are as follows:

NUMBER OF 15 CENT CASH FARE RIDERS

	Weekdays	Saturday
No. of 15¢ Fares 9:00 AM to 3:00 PM	128,901	116,486
No. of 15¢ Fares Average Entire Day	429,240	258,226
Percent of 15¢ Fares 9:00 AM to 3:00 PM To Entire Day	30.03	45.11

POTENTIAL ANNUAL REVENUE

Weekdays & Saturdays - 15¢ Fares

254 Weekdays x 429,240 Equals 109,026,960
53 Saturdays x 258,226 " 13,685,978
122,712,938 @ 15¢ $18,406,941

POTENTIAL ANNUAL REVENUE
5¢ Fare 9:00 AM to 3:00 PM.

Weekday
109,026,960 30.03% 32,740,796 @ 5¢ $ 1,637,039.80
Weekday
109,026,960 69.97% 76,286,164 @ 15¢ 11,442,924.60

(continued on next page)

POTENTIAL ANNUAL REVENUE
5¢ Fare 9:00 AM to 3:00 PM.
(continued)

Saturday 13,685,978	45.11%	6,173,745 @ 5¢	$ 308,687.25
Saturday 13,685,978	54.89%	7,512,233 @ 15¢	1,126,834.95

12% Increase on 9:00 AM To 3:00 PM Fares

* 12% of 38,914,541 Equals 4,669,745 @ 5¢ 233,487.25

$14,748,974

POTENTIAL ANNUAL LOSS $ 3,657,967

AVERAGE LOSS PER MONTH $304,831

* A study of the fare change on June 1, 1952 from a 10¢ to a 15¢ fare indicated that a loss of 6% in the number of fare passengers carried was the result of a 5¢ raise in fares. If the fares were to be reduced 10¢ it is possible that the railway would regain double this percentage of 12% in 5¢ fare passengers.

Based on the aforementioned paragraphs we arrive at the following conclusions:

While the potential annual loss of $3,657,967 would be reduced by any additional riders, (Not including the 12% allowed in the foregoing calculations) carried between the proposed reduced fare hours, over current riders in this period, the number of increased riders would have to amount to a figure of 73,159,340 added riders annually to maintain current cash passenger revenue and not suffer a revenue loss. The required increase in riders for a month would have to total 6,096,620. In other words, the total riders under the reduced fare would have to increase to a figure of 300 percent of the riders carried during the period or to three (3) riders for every one

now carried. In the current fiscal year the railway will probably require $3,102,691 taxes as has been provided for in the budget. If the present revenues of the railway are reduced to the extent indicated by the calculations, it would require a great reduction in service, or more than double the funds required to operate from taxes.

While the only definite means of ascertaining the exact results of this reduced fare proposal is through a period of trial, it is indicated that any trial period would be very costly to the railway, as a month's trial could result in a loss of $304,831 for which funds are not provided.

Other factors entering into this special reduced fare rate are as follows:

(A) The matter of fare collection would involve certain difficulties particularly on the railway's cable lines where fare control devices register only in units and not in dollars and cents. This also applies to collectors who use "bell" registers. These difficulties no doubt could be surmounted but at additional expense.

(B) There is a question as to whether discrimination is not involved due to the fact that peak hour riders cannot possibly take advantage of the proposed reduced fare owing to the hours in which they must use the transit service. Some riders normally using the transit facilities before 9:00 AM and after 3:00 PM may possibly arrange to take advantage of the reduced rates, but these riders would add to the loss in revenue as indicated in the calculations made.

(C) The physical procedure of fare collection at the hours of 9:00 AM when the fare would be reduced and at 3:00 PM when the rate would be increased, would no doubt result in endless argument from passengers at those particular hours. Any delays in service, for instance, might bring up the problem that the passenger was awaiting service within the proposed hours of the decreased fare, but transit facilities were not available, all of which certainly would not create good public relations.

(D) Note should be taken that on rainy or inclement days few people who do not have to travel use the transit facilities. Therefore, on such days it is doubtful if any travel increase in off-peak periods to that now experienced, would result from the inducement of a lower fare.

(E) I have no knowledge of any existing reduced fare structure as proposed, during off-peak periods, that are now in effect on any other transit system.

In view of the figures developed showing the very adverse financial effect to the railway, and for the other reasons stated, I do not recommend that this proposal be placed into effect.

In connection with the five-cent fare proposal it is interesting to note that in New Orleans which has a 7-cent fare has lost passengers at about the same rate as San Francisco. The same is true of the great New York Subway System which until very recently was operating on a 10-cent fare.

b) Twenty-cent Fare

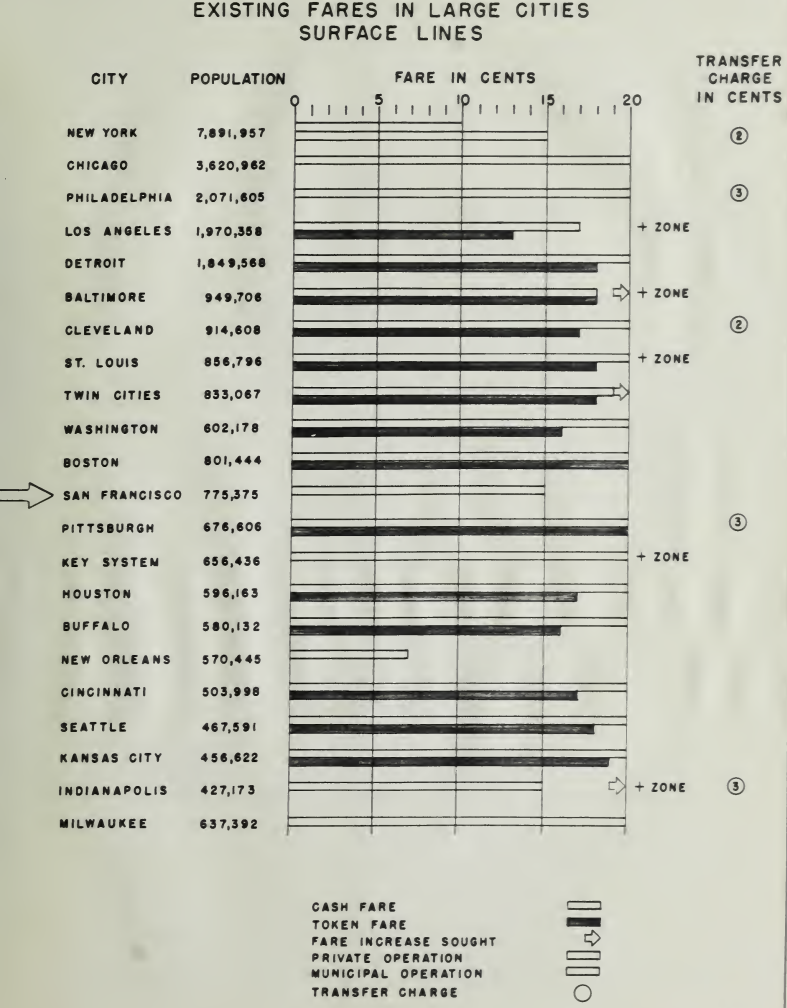
With revenues declining another suggested solution is to raise basic fares to 20 cents, and student fares to 7½ cents. This has been done in other cities. On the following page is a chart of existing fares in large cities of the United States showing 15 cities where a cash fare of 20¢ is charged.

An indication of what might be realized in additional revenue from increased fares is obtained from a report recently received from the American Transit Association. In thirty cities observed having populations of over 500,000, a one per cent raise in fares resulted in an average loss of 0.26 per cent in passenger traffic. Cited below are the results of several fare raises in other cities taken from this report:

Date of Fare Change	City and Company	% Loss in Traffic for each 1% Increase In Average Fare
7-25-53	N.Y.C.(N.Y.) Transit Auth.(Bklyn.Surf.)	0.32
7-25-53	N.Y.C.(N.Y.) Transit Auth.(Man.Surf.)	.51
1-30-54	Philadelphia (Pa.) Transpn. Co.	.14
9-1-54	Baltimore (Md.) Transit Co.	.27
4-12-54	MTA (Boston, Mass.)	.31
6-1-52	Muni Railway of San Francisco	.18
7-1-54	Cincinnati (O.) Transit Co.	.17
9-1-54	Seattle (Wash.) Transit System	.45
8-1-51	Chicago (Ill.) Transit Auth.	.28
1-1-53	Twin City Rapid Trans. (Minneapolis)	.56
2-1-52	Kansas City (Mo.) Pub. Service Co.	.38
9-27-54	Duluth (Minn.) Superior Trans. Co.	.35

This report contained 109 observations. The above cities were cited here for their importance or because they involved fare changes at or near the 20-cent level.

EXISTING FARES IN LARGE CITIES
SURFACE LINES



SK 560131 WM

We calculate that for every 10 per cent raise in fares results in a loss of 2½ per cent of the passengers carried. Applying these figures to the estimated number of passengers to be carried in the fiscal year 1956-1957 we get the following results:

(1) a 20¢ Basic Fare

Decrease in revenue passengers	10,118,027
Increase in passenger revenue	$ 4,047,213

(2) a 7½¢ Student Fare

Decrease in student fare passengers	1,395,000
Increase in student fare revenue	$ 174,375

Thus it will be seen that with this type of fare raise the Municipal Railway could do without a subsidy in the next year. It should be remembered, however, that such a cure is only temporary as long as the present downward spiral of passenger traffic continues. A decision on this proposition also involves a delicate balancing of the interests of the taxpayers on the one hand and the rate payers on the other. Such a policy decision can be made only by the Mayor, Public Utilities Commission and the Board of Supervisors.

c) Zone Fares

Requests have been received from individuals and organizations for zone fares. The establishment of a zone fare pattern contemplates an inner zone rate of fare which is less than the existing basic fare and it becomes essential to determine the proportion of existing transit riders who will pay such reduced rate of fare as well as the proportion who will pay the

present rate of fare or possibly higher rates for local or express service.

In this connection it is interesting to note that in April, 1954, the Institute of Transportation and Traffic Engineering of the University of California issued a research report by Mr. Norman Kennedy, "A Study of Zone Fares in the Transit Industry," and in his summary and conclusions of the report, Mr. Kennedy stated in part:

"A transit system serving a high-density population with relatively short transit lines might find a uniform flat-fare structure to be better suited to its operating conditions than a zone-fare structure. But a transit system which must serve a dispersed population and operate long transit routes, along portions of which transit patronage is light because of low population densities, might find some form of zone-fare structure to be more satisfactory."

As San Francisco is small in area, it is probable that it would be in the first category.

A determination as to the advisability of zone fares can only be made by securing information as to both the point of origin and the point of final destination of journeys now made by patrons of the Municipal Railway. Such a study must be made with great care and must follow a carefully worked out plan.

As the present staff of the Railway is not adequate to make such a study, a budget request was made last year for $25,000 to employ an outside transit engineering firm experienced in zone fare studies to make an independent study. In 1955 this request for funds was deleted from the budget by the Mayor's Office.

6. MISCELLANEOUS REVENUE

As a partial offset to passenger revenue decline the Railway is trying to develop other sources of revenue. The greatest of these is the contract of advertising in the cars and buses. In the past five years this source has yielded revenue as follows:

1950-1951	$141,484.39
1951-1952	128,756.22
1952-1953	121,381.86
1953-1954	118,325.04
1954-1955	143,339.88

Recently the Railway Management and the Commission have been diligently trying to increase the amount of revenue received from this source. It seems likely that at least $100,000 more per year will be realized in the near future.

We are presently exploring the possibility of using our excellent machine and automobile repair shops to the limit of their capacity by doing work for other city departments on a work order basis. This could produce substantial additional revenue to the Railway.

The Railway Management, the Commission and the public should be ever alert to discover other incidental sources of revenue for the Municipal Railway.

7. OPERATING COSTS

While passenger revenue has been on the decline, the expenses of operation have been steadily increasing and wages of operators have increased 44 per cent since 1912 and the salary

of craftsmen and office help have increased proportionately. The cost of fuel, tires, materials and supplies have also risen proportionately. The fare increase and service reductions however have not kept pace with the increased costs. Fares have increased only 200 per cent since 1912 and miles operated have only been reduced 6.71 per cent in the past 5 years. (See chart on next page).

Every possible economy has been placed in effect by all departments in an effort to offset increases without deferring maintenance and we are presently operating at a low unit cost.

a) Personnel

It must be borne in mind that, not only does the Railway pay wages which are equal to the highest in the state, but the majority of its employees are under Civil Service.

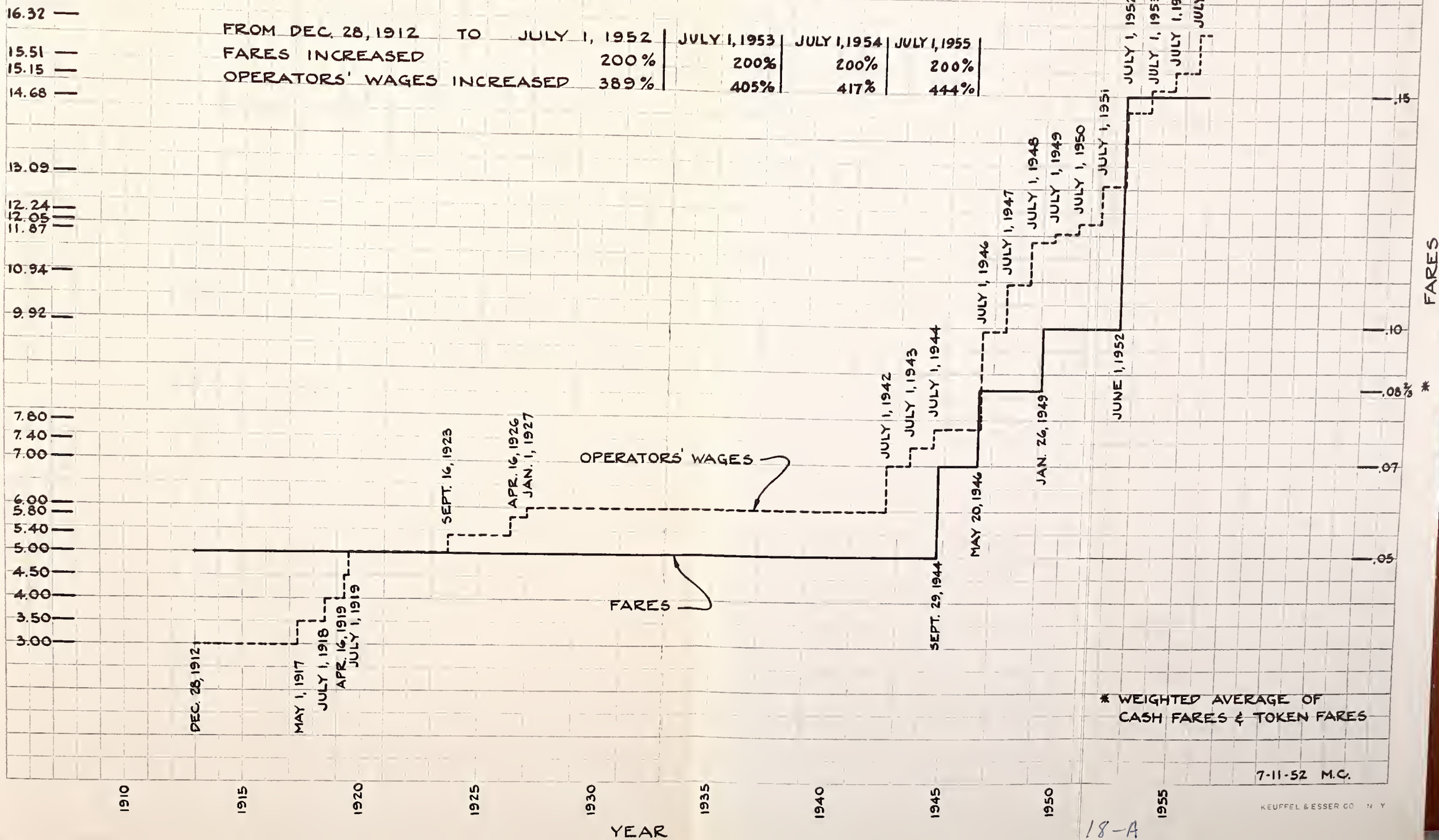
In the existing organizational chart for the Municipal Railway the work load has been evenly distributed to the staff for efficient operation. All of the duplicating positions in the Railway that occurred with the purchase of the Market Street and California Cable Railways have been eliminated.

The present policy of investigating permanent positions as vacancies occur and replacing them only if necessary will be continued. The deletion of permanent positions in any department will not be made unless it is absolutely necessary. During the past 10 years, from the 1945-46 to the 1955-56 budget, a total of 1,629 positions has been deleted. In the 1956-57 budget an additional 48 positions have been deleted without protest or unfavorable publicity. It must be

MUNICIPAL RAILWAY
OF SAN FRANCISCO

FARES & OPERATORS' WAGES

	FROM DEC. 28, 1912 TO JULY 1, 1952	JULY 1, 1953	JULY 1, 1954	JULY 1, 1955
FARES INCREASED	200%	200%	200%	200%
OPERATORS' WAGES INCREASED	389%	405%	417%	444%



* WEIGHTED AVERAGE OF
CASH FARES & TOKEN FARES

7-11-52 M.C.

KEUFFEL & ESSER CO. N.Y.

18-A

remembered, however, that there is a definite limit to the number of positions which can be eliminated without affecting the safety or efficiency of the service.

Decreases in personnel from 1945-46 to 1955-56 Pgs. 19A-B-C.

b) Service

It is clear that one of the possible methods for balancing the Railway's budget would be to decrease service. This raises at least two problems. FIRST: curtailed service inevitably results in a further decline of passengers, thus necessitating a further decrease in service resulting in a further decrease of passengers. SECOND: it has become clear that the public of San Francisco does not wish service curtailments. Extensive service reductions, with curtailment of night and Sunday service, were recommended by the Railway in January, 1954, but this move to reduce expenditures was disapproved by the Board of Supervisors.

We must thus make every effort to increase the efficiency and economy of the service without affecting its quality.

Impressive savings have been effected over the past few years in tailoring the service to fit the riding demand, as far as is practicable, observing regulations under which we are required to operate.

This program should be continued through continual checking of passenger traffic and running time - with schedules being adjusted accordingly in the interest of efficiency and economy of operation.

It is part of the regular function of the Traffic Department of the Municipal Railway to make route studies toward

 (Continued on Page 20)

Following is a tabulation showing the increase and decrease in employments during this period:

Class No.		1945-46	1955-56	Increase	Decrease
A154	Carpenter	26	13		13
A160	Foreman Carpenter	2	1		1
A252	Glazier		1	1	
A364	Car and Auto Painter	16	13		3
B6	Accountant II	1	3	2	
B68	Chief Clerk	2	4	2	
B102	Teller	4	5	1	
B222	General Clerk	62	96	34	
B222.1	Car House Receiver		4	4	
B228	Senior Clerk	6	7	1	
B234	Head Clerk	3	1		2
B308a	Calculating Machine Operator (key drive)	14	15	1	
B308b	Calculating Machine Operator (rotary type)	2	-		2
B309a	Key Punch Operator	-	3	3	
B310a	Tabulating Machine Operator, Remington Rand	-	2	2	
B310.1a	Senior Tabulating Machine Operator, Remington Rand	-	1	1	
B354	General Storekeeper	1	-		1
B408	General Clerk Stenographer	26	20		6
B412	Senior Clerk Stenographer	1	2	1	
B454	Telephone Operator	8	7		1
B512	General Clerk Typist	13	25	12	
B516	Senior Clerk Typist	3	5	2	
C52	Elevator Operator	3	4	1	
C104	Janitor	22	23	1	
C104.1	Car Cleaner	97	99	2	
C105	Working Foreman Car Cleaner	-	7	7	
C107	Working Foreman Janitor	2	-		2
C152	Watchman	7	10	3	
E105	Armature Winder's Helper	12	-		12
E108	Armature Winder	9	5		4
E108	Electrician	-	1	1	
E120	Governorman	2	3	1	
E122	Power House Operator	19	20	1	
E124	Senior Power House Operator	4	2		2
E150	Lineman Helper	3	-		3
E200	Electrical Railway Shop Mechanic	97	37		60

Class No.		1945-46	1955-56	Increase	Decrease
E202	Senior Electrical Railway Shop Mechanic	85	95	10	
E206	Sub-Foreman Electrical Railway Shop Mechanic	20	11		9
E208	Foreman Electrical Railway Shop Mechanic	10	6		4
E210	General Foreman Electrical Railway Shop Mechanic	1	-		1
E220	Supervisor of Electrical Propulsion Equipment	-	1	1	
F410d	Engineer (Civil, Public Utilities)	3	-		3
F414	General Superintendent of Track and Roadway	1	-		1
F654	Traffic Checker	-	7	7	
G106	Claims Adjuster	3	-		3
J4	Laborer	24	13		11
J66	Garageman	36	51	15	
J68	Sub-Foreman Garageman	4	3		1
J92	Rope Cable Splicer	-	4	4	
J152	Trackman	126	48		78
J156	Switch Repairer	6	3		3
J160	Track Welder	11	3		8
J162	Electric Arc Welder	6	4		2
J164	Sub-Foreman Trackman	7	-		7
J166	Track Foreman	7	6		1
J168	General Foreman Trackmen	2	1		1
M4	Assistant General Superintendent of Equipment and Overhead Lines	1	-		1
M5	Assistant Superintendent of Equipment and Overhead Lines	1	-		1
M6	Superintendent of Equipment and Overhead Lines	1	-		1
M7	General Superintendent of Equipment and Overhead Lines	1	-		1
M10	Supervisor of Automotive Equipment	-	1	1	
M22	Superintendent of Power and Lines	1	-		1
M53	Auto Mechanic	38	65	27	
M54	Auto Machinist	33	41	8	
M55	Foreman Auto Machinist	7	6		1
M56	Garage Foreman	2	-		2
M57	Sub-Foreman Auto Machinist	2	5	3	

Class No.		1945-46	1955-56	Increase	Decrease
M60	Auto Body and Fender Worker	2	8	6	
M107	Blacksmith's Finisher	4	3		1
M108	Blacksmith	6	3		3
M252	Machinist's Helper	6	2		4
M253	Machine Tool Operator	18	2		16
M254	Machinist	22	16		6
01	Chauffeur	11	6		5
0166.1	Junior Operating Engineer	2	-		2
0168.1	Operating Engineer	6	11	5	
0294	General Foreman of Street Repairs	1	-		1
R106c	Supervisor of Activities-Music	1			1
S56	Special Instructor	11	-		11
S60	Instructor	3	2		1
S102	Conductor	1,785	1,017		768
S104	Motorman	1,765	1,011		754
S108	Bus Dispatcher	-	1	1	
S111	Inspector	91	106	15	
S113	Schedule Maker	-	7	7	
S115	Senior Claims Investigator	-	2	2	
S120	Day Dispatcher	10	15	5	
S122.1	Chief Inspector	-	1	1	
S124	Supervisor of Schedules	2	1		1
S126	Superintendent of Traffic	-	1	1	
S128	Division Superintendent	7	4		3
S129	Supervisor of Accident Prevention	1	-		1
S130	Assistant Superintendent of Transportation	1	2	1	
S132	Superintendent of Transportation	2	1		1
S134	General Superintendent of Transportation	1	-		1
				204	1,833
			TOTAL DECREASE		1,629

more efficient operation or improvement in service. In this connection, a plan for revision and improvement in crosstown service is in progress, the first phase of which has been submitted for your consideration and approved, and can be accomplished without additional expense.

Cooperative effort with other City departments in traffic improvements toward expediting the movement of transit vehicles and encouraging the use of transit vehicles which make more efficient use of street space than private automobiles, is presently under study. This study includes the following:

1. Eliminating parking on narrow streets.
2. Widening streets where possible.
3. Establishing more one-way streets.
4. Setting up certain streets or lanes for transit use exclusively.
5. Providing turn-outs on express ways and other busy roads for fast loading.
6. Expansion of towaway regulations on transit streets and congested areas in peak periods.

Various plans on "skip-stop" service have been put into effect and the extent now used seems about as practical as can be evolved. Additional "skip-stop" service would result in economies and time schedule savings, and a study is in progress by the Traffic Department for additional "skip-stops" on various Lines.

Beneficial results can be obtained, wherever possible, through express and limited stop service, and a study is being

MUNICIPAL RAILWAY OF SAN FRANCISCO — AVERAGE DAILY SWITCHBACKS — SCHEDULE & TRAFFIC DEPARTMENT

Indicating Improvement In Regularity of Service *

236

AVER 134

AVER 110

AVER 76

AVER 59

AVER 45

AVER 46

Pre-Christmas Switchbacks Reduced by Special Schedules.

220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959

* A Major Factor in the General Improvement In This Record Includes Scheduling with Realistic Running Time and Reasonable Recovery Time.

Each line 2

made looking toward possible additional express and limited stop service.

At the present time, due to provision of the Charter, it is necessary to operate many of our vehicles in the off-peak hours when they are not needed. Charter now specifies that a man must work to be paid. This is interpreted to mean the platform worker must be operating his vehicle. If a change were made in the Charter that would permit the Railway to pay employees while standing by, a considerable saving could be made by pulling these vehicles into their respective division and paying the men standby time. The saving would be in fuel, electric power, tires and decreased mileage that would help to reduce maintenance costs.

c) Insurance and Claims

Recommendation is made for discontinuing the excessive liability policies and establishing a method of setting up a reserve fund for this purpose or reducing the amount of liability from $1,000,000 to $500,000 which would reduce the monthly payments to the insurance carrier.

On April 1, 1945, the Municipal Railway purchased insurance covering excess public liability and property damage. The original policy protected the Railway for losses in excess of $25,000 up to a limit of $225,000. This coverage has been modified from year to year and the present policy protects the Railway for accidents in excess of $37,500 up to $1,037,500. During this period up to February 29, 1956, the Municipal Railway paid in premiums $1,232,128.05 to the excess insurance

carriers. In this same period the carriers have paid in the settlement of claims the amount of $913,596.58. We have paid $318,531.47 more than we have received in settlements. However, this amount could be reduced in the future settlement of pending claims.

At the present time the General Claims Agent has the authority to write checks up to and including the sum of $100. The record of settlements by the General Claims Agent will show that approximately 70 per cent of the settlements are from $1 to $500. A discussion should be held on this subject with the view to increasing the General Claims Agent's authority to the sum of $500, which increase would certainly expedite a greater number of settlements and would relieve the Claims Bureau of unnecessary handling of files.

The purchase of six additional automobiles, fully equipped with two-way radio, photographic and measuring equipment, is necessary for this department. At the present time the claims investigators are using their own cars and are not fully paid on a mileage basis to fully compensate them for their monthly expenses. Increased funds for employees using their own automobiles have been placed in the budgets but have been deleted by the Mayor's Office or the Supervisors.

To obtain the maximum efficiency in the File and Record Room, additional equipment such as super carder, super files, etc., is required. At present, typists chairs and those being used by Claims Adjustors, are obsolete and should be replaced with new type of posture chairs.

The Bureau of Personnel and Safety is one of the Utilities Bureaus of which the Director reports to the Manager of Utilities. The Bureau is responsible for the handling and training of operating personnel for the Municipal Railway. This Bureau also is responsible for the safety of traffic and industrial accidents for the Railway. All types of accidents on the Railway in 1946 totaled 13,509 and in 1955 the total was reduced to 6,591. This large reduction in accidents was due in part, to the following reasons:

1. 19 street car lines formerly operating old two-man cars have been converted to rubber-tired operation.
2. 360 new trolley coaches placed in service.
3. 35 modern street cars placed in service.
4. 350 motor coaches placed in service.
5. 170 Mack Diesel coaches leased and placed in service.

   The above new vehicles added to the fleet, with greatly improved braking and doors interlocked with brakes, have materially helped to reduce accidents.
6. Through 1955 the Municipal Railway handled 118,667,026 less passengers than in 1946 and as every passenger handled is a potential accident hazard, this has greatly aided in reducing accidents.
7. The number of car miles operated in 1955 was 1,690,773 less than in 1946 which cut down

the accident exposure rate for the vehicles operating, which also materially helped reduce accidents.

8. The replacement of the old projecting-type of fenders on the street cars with a life guard type fender under the platform has also reduced personal and vehicle accidents.

9. 64 old type street cars have been equipped with safety doors, folding steps and brakes interlocked with rear door, to prevent boarding and alighting accidents while car is in motion.

Funds appropriated and expended for Passenger and Damage Claims from 1946-47 to 1955-56 are as follows:

	PROVIDED	EXPENDED	
1946-47	$ 810,000	$ 1,297,300	
1947-48	900,000	1,256,000	
1948-49	900,000	1,013,950	
1949-50	1,000,000	1,392,750	
1950-51	1,100,000	1,245,215	
1951-52	900,000	1,140,650	
1952-53	1,285,000	1,462,275	
1953-54	1,400,000	1,210,495	
1954-55	1,130,000	1,093,142	
1955-56	1,000.000	682,810	Actual to 1/27/56
		1,170,000	(12 mos. est.)

There can be no question but that the amount of claims paid in the past has been excessive. Many, if not most of the accidents could have been avoided. The quality of investigations with additional investigators has been improved. The citizens have been lax or actually hostile when asked their version of accidents or to serve as witnesses. Much work can profitably be done in this field and great savings should result.

8. CAPITAL AND OTHER COSTS

In addition to the usual operating costs which we have discussed, we have the continuing cost of maintenance, replacements and additions if the Railway is to be kept in an economical, efficient operating condition. We shall examine some of the items involved in this matter. It will be seen that some will result in substantial savings and at the same time increase efficiency. Sometimes it is good economy to spend in order to save.

a) ACCOUNTING DEPARTMENT

It is highly desirable that the accounting system of the Railway and the many regular and special reports made up in connection with our operation be studied as to streamlining present practices and transferring to other departments surplus personnel that would be the result of streamlining.

Because of the complexities of the accounting practices brought about by various Charter provisions and made to satisfy other agencies of the City Government, this survey

should be made by Mr. George Negri, Director of the Bureau of Accounts, as he is thoroughly familiar with the proper accounting procedures. The replacement of present antiquated stock card facilities with modern visible index system would facilitate more efficient processing of Materials and Supply records and would cost $4,000. The reduction in the personnel of one clerk would pay for this equipment.

b) DEPARTMENT OF POWER AND PLANT

During the next five years, serious consideration will have to be given to re-railing a large portion of the present tracks. This includes large parts of L, N and J Lines and also tracks on West Portal Avenue. The approximate cost for this work would be $2,015,000.

If these tracks are not renewed, it will ultimately result in excessive maintenance costs; and the continuous excavating along the tracks in making repairs over these sections will create not only a rough operation but an unsightly condition in the street. All of this would not be in the public interest and will not tend to maintain good public relations.

c) POWER STATIONS

The five manually operated substations with rotating type equipment, located at Turk and Fillmore, Bryant and Alameda, Geneva and San Jose, Second and Stevenson and Eighth and Geary, should for economical operation, be replaced with modern automatic Mercury Arc Rectifiers. The cost of these replacements would be approximately $1,200,000. This

equipment however would pay for itself over a period of time as the annual salary of Power House Operators is $129,293.45, and these positions would be eliminated.

d) BUILDINGS

I. Geneva Car House

This office building is one of the main divisions of the Railway as all 630 operating personnel, for the street cars at Geneva and the buses at Ocean divisions work out of this location.

The car house and office building was built in 1903 and is badly in need of repairs. As this car house is ideally located for the tunnel-line cars to save mileage, it will be retained at this location. The approximate cost of rebuilding both car house and office building would be $1,300,000.

To provide badly needed space for the Transportation Department at the Geneva Car House, the present office building on Turk Street near Webster, should be moved to the Elkton Shops area and the Equipment Department now occupying office space at Geneva car house, could move into the new building, providing additional space for car men. $10,000 is the approximate cost of moving this building.

II. Geary Car House

With the building of the western addition housing development, street cars will have to be removed from Geary Street and the storage space for cars at the car house will become inactive. As the structural changes in the building to accommodate rubber-tired vehicles would be very expensive,

a study will be made as to using this space for shops and the Department of Overhead Lines. At present, both Ocean Garage and Kirkland Garage are up to capacity as to the number of vehicles they can accommodate. If additional motor coach service is contemplated, new storage facilities must be considered.

III. Elkton Shops

The currently planned routing of the Mission Freeway will necessitate some track realignment as well as building repairs to Elkton Shops. The Division of Highways will undoubtedly pay for this work. At the present Paint Shop is in the path of the Freeway, it will be removed. The Division of Highways will undoubtedly pay for the removing and advance funds for a new paint shop.

The new paint shop will be much smaller than the present shop and will be modern in every respect for spray painting.

e) REVENUE ROLLING STOCK

TROLLEY COACHES - No replacements necessary.

CABLE CARS - No replacements necessary. Maintenance to be handled in usual manner.

MOTOR COACHES - 170 new diesel buses are now operating and under the lease plan all remaining gasoline buses will be replaced during the next five years.

STREET CARS - At present 40 PCC one-man cars are operating. Five of these received in 1939 should be replaced by 1960. Being hand-controlled, the operation is entirely different from the other 35 PCC cars. A program is now being

worked on by the Public Utilities Commission and the Controller for the leasing of additional one-man PCC cars to replace the old two-man cars.

f) NON-REVENUE ROLLING STOCK

AUTOMOBILES - 25 autos are assigned to various departments and all of these should be replaced within the next five years. Ten new autos recently received for the Inspectors Department will average over 30,000 miles per year. The new system of keeping a record of costs on each vehicle will determine when it should be replaced. It is not possible to reduce the size of this fleet and as we are receiving tax support to operate the Railway no replacements can be placed in the budget.

TRUCKS - 53 trucks of all types, including wreckers, are assigned to various departments. One tower truck in the Line Department should be replaced as soon as possible at a cost of approximately $16,000 and as the monthly mileage of other trucks is small they can operate for several years.

MOTOR CYCLES - Three motor cycles of the three-wheel type are assigned to the Track Department. As the daily mileage on this equipment is low, no replacement will be necessary for several years.

g) NEW PCC CARS FOR TUNNEL LINES K, L, M AND N

A complete change-over to one-man PCC car operation on Lines K, L, M and N Lines will involve:

M Line loop at outer terminal; also pull-out and pull-in track connections at St. Francis Circle.

N Line wye at Thirtieth and Judah; also rebuilt worn out tracks on Carl Street.

COST

47 PCC cars @ $44,500 . . . . . $2,091,500

Engineering Department Estimate:

Rebuild Line N track on Carl Street .	$ 63,000	
Line N wye at Thirtieth & Judah . . .	42,000	
Line M terminal loop	112,500	
Line M pull-out and pull-in track connections	57,000	
Two-thirds of J and N pull-out and pull-in track connections	88,000	
TOTAL COST		362,500
		$2,454,000

SAVINGS

Accounting Department Estimate, a/c one-man cars . $ 356,000

h) NEW PCC CARS FOR LINE J -- CHURCH STREET

A complete change-over to one-man PCC car operation on Line J will involve:

COST

Engineering Department Estimate:

Construction of new loop at outer terminal at Thirtieth & Noe . . . . . $ 153,000

Pull-out and pull-in track connections in vicinity of Church, Duboce and Market -- one-third of cost . . . . . $ 44,000
(Two-thirds being allocated to Line N project)

14 new PCC cars @ $44,500 623,000

$ 820,000

SAVINGS

Accounting Department Estimate . . . . . $ 109,000

1) GEARY STREET LINE B MODERNIZATION

Replace obsolete two-man cars on Geary Lines with trolley coaches. Estimate includes overhead construction, loops and turn-backs. This is necessitated by Western Addition project to which City is committed and is more economical than relaying of portions of track which would otherwise be required.

EQUIPMENT - Trolley coaches available from present fleet. Program involves partial express service with motor coaches.

COST

Engineering Department Estimate:

Overhead, loops, etc. . . . . $ 442,000 *

* Includes construction of duct line account Geary Expressway.

SAVINGS

Accounting Department Estimate . . . . . .$ 191,000

(Track removal to be handled by Department of Public Works with general street improvement program)

j) CASTRO STREET NO. 8 TROLLEY EXTENSION

In prior plans it was contemplated that extension of the No. 8 Trolley Coach Line would be to a loop at Diamond and Duncan. There has since been a re-routing of Lines in this vicinity. Under present conditions extension of the No. 8 Line should be via Castro to 26th and thence looping via 26th, Diamond, 28th, Noe and 26th to Castro. This plan also makes possible a revision and consolidation of vicinity routes, providing a general improvement in service for the area. The No. 8 Extension had the support of the community in the November 1953 election. The bond issue involved failed to obtain the necessary two-thirds vote as it included other proposals which were controversial in nature.

EQUIPMENT - 5 trolley coaches, available from present fleet.

COST

Engineering Department Estimate:

Overhead construction from 18th and Castro to proposed outer terminal	$185,000
Feeder installation from new substation	35,000

Construction of new 1000 KW
automatic substation at 24th
and Castro to serve extended
No. 8 Line $170,000

TOTAL $390,000

SAVINGS

Schedule and Traffic Department Estimate . . .$35,000 per year
(This economy is possible through consolidation
and service adjustment on vicinity motor coach
routes, including a through routing combination
of Nos. 24 and 35 Lines)

k) REROUTING OF NO. 3 TROLLEY COACH LINE ON JACKSON
Via Jackson, Van Ness, Sutter

The "Van Ness" routing of the No. 3 Line would duplicate the No. 45 service between Van Ness & Jackson and Sutter & Sansome. To avoid part of this duplication, express service can be provided on Line 45, via Broadway Tunnel.

COST

Engineering Department Estimate:
Trolley wire installation $138,500
Feeder installation from new
substation . . . 21,500
One-half cost of construction
of 2000 KW Automatic substation
in vicinity of Hyde & Sacramento

to serve Nos. 3 and 55 Lines . . . .$138,000 *

TOTAL $298,000*

* Cost would be $138,000 additional if Line 55 project is not included (Item No. 6)

SAVINGS

Reduction in operating expense due to faster running time via the Broadway Tunnel . . . . . $ 10,000

1) SACRAMENTO STREET ELECTRIFICATION

Steep grades are encountered on Sacramento Street as follows:

Kearny to Grant	8.78% to 10.31%
Grant to Stockton	14.54%
Stockton to Powell	18.66%
Powell to Mason	17.21%

Trolley coaches can negotiate such grades faster than motor coaches with less strain on equipment, and without the considerable noise of combustion engines turning over at high speed. Trolley coaches, are, therefore, particularly well suited to this type of operation.

Two routes are under consideration:

1. Principally via Clay and Sacramento.
   Present service includes limited stop trips during rush periods, which would not be practicable with complete substitution of trolley coaches on this route.

2. Directly via California -- both ways.
(Proposed by Supervisor Carberry)
Cable cars to furnish local service east of Van Ness, thus permitting limited stop service with trolley coaches. This proposal has considerable merit, but may prove controversial.

Both plans involve operation via California on outer portion of route. Both, therefore, involve certain abandonments.

COST

Engineering Department Estimate:

Overhead facilities from Embarcadero to Presidio Avenue with necessary turnbacks. (Cost about the same for either route)	$790,800
Feeder installation from new substation	18,400
One-half cost of constructing 2000 KW automatic substation in vicinity of Hyde & Sacramento Streets to serve #3 and #55 Lines.	138,000 *
	947,200
8 new trolley coaches @ $24,100	192,800
TOTAL COST	$1,140,000 *

* Cost would be $138,000 more if #3 Line project is not included. (Item No. 5).

SAVINGS

Schedule Department Estimate . . . . . $ 38,000

This is based on operation of #55 trolley coach on California Street which would permit consolidation of service with Line #61, nights and Sundays.

EQUIPMENT

25 Trolley Coaches, Total

17 Available from present fleet

8 New Trolley Coaches Required

m) VACUUM CLEANING EQUIPMENT

The present method of cleaning the interior of transit equipment is slow and inefficient.

The proposed improvement would involve installation of large vacuum type cleaning equipment.

It is estimated that the savings effected would pay for the vacuum equipment in approximately one year as it would require less car cleaners. No employee to be laid off, reduction in force to be made as vacancies occur.

COST of Equipment $28,000

SAVINGS per year $26,000

n) MODERN FARE COLLECTION EQUIPMENT

Lock-type fare boxes reduce certain losses in revenue and also make possible a large saving in operators' payroll expenses.

Ten-minute turn-in time is eliminated for each run, as well as travel time in many instances -- a considerable part of which is computed at time and one half.

COST OF FARE BOXES	$ 650,000
SAVINGS, Per Year	200,000

o) SOUTHERN PACIFIC LOOP

Conferences have been held between the staff of the Municipal Railway and representatives of the Police, Public Works and City Planning Departments over a period of nearly two years in working out the most practicable operation at the Southern Pacific Depot, including route changes in connection with the one-way street program for Third and Fourth Streets.

The Municipal Railway staff members recommend a direct loop for No. 30 trolley coaches via Fourth, Townsend and Third, to avoid a time-consuming operation via Second Street, which would carry passengers in a roundabout manner away from their intended destinations. Staff members of other City Departments have cooperated in accomplishing the planning of direct routing.

Action on the previously proposed Second Street No. 30 trolley coach loop has been held in abeyance pending a decision on the one-way street program.

EQUIPMENT - Same as at present.

COST

Engineering Department Estimate $103,000

(Including changes in trolley wire installation to conform to Third-Fourth-Stockton-Kearny one-way street plan; also Southern Pacific loop and turn-back at Mission Street).

SAVINGS

Same Cost as present operation.

p) REPLACEMENT OF OBSOLETE OFFICE EQUIPMENT

This item is quite self-explanatory and involves replacement of over-age typewriters, adding machines, duplicating machines, etc. It also provides for revising procedure, together with new equipment, where warranted, in the interest of greater efficiency.

Estimated Cost - $24,000

q) IMPROVEMENTS AT ELKTON SHOPS

This proposal covers installation of fire walls in Elkton Shop to comply with recommendations of Fire Marshal, and installation of a heating system.

COST

Management and Mechanical Department estimate. . . $30,000

SUMMARY OF ESTIMATED COSTS AND

ANNUAL SAVINGS FOR PROPOSED IMPROVEMENTS

	Estimated Cost	Annual Saving
1. Replace 47 obsolete two-man cars on the K-L-M-N lines with new PCC one-man operated cars, relaying certain track, pull-out and pull-in track connections; also new outer M loop.	$2,454,000	$ 356,000
2. Replace 14 obsolete two-man cars on the J line with new PCC one-man operated cars. New outer loop at 30th Street and pull-out and pull-in track connections.	820,000	109,000
3. Construct wire system for trolley coach operation on B line. (Equipment available from present fleet).	442,000	191,000
4. Extend #8 trolley coach line to 28th & Noe Streets (Equipment available from present fleet).	390,000	35,000

SUMMARY OF ESTIMATED COSTS AND

ANNUAL SAVINGS FOR PROPOSED IMPROVEMENTS

	Estimated Cost	Annual Saving
5. Trolley construction to reroute #3 trolley coach line via Jackson-Van Ness.	$ 298,000	$ 10,000
6. Electrify the #55 bus line and operate via Clay-Sacramento or via California Street, including 8 new trolley coaches.	1,140,000	38,000
7. Equipment for more efficient cleaning interior of transit vehicles.	28,000	26,000
8. Modern fare collection equipment.	650,000	200,000
9. Replacement of obsolete office equipment.	24,000	- -
10. Overhead trolley wire changes to conform to Third-Fourth-Stockton-Kearny one-way street plan; also loop at Southern Pacific Depot and turn-back at Mission Street.	103,000	- -

SUMMARY OF ESTIMATED COSTS AND

ANNUAL SAVINGS FOR PROPOSED IMPROVEMENTS

		Estimated Cost	Annual Saving
11.	Improvements at Elkton Shops	$ 30,000	$ - -
12.	Improvements to Building (Geneva Car House)	1,300,000	- -
13.	Improvements to Track L, N, J	2,015,000	- -
14.	Improvements to Power Stations	1,200,000	129,293
15.	Visible Aid Index System	4,000	4,080
		$ 10,898,000	$1,098,373